(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 2 June 2005 (02.06.2005)

PCT

(10) International Publication Number WO 2005/049844 A3

(51) International Patent Classification⁷: C12N 15/869, A61K 35/76, C12N 7/01

(21) International Application Number:

PCT/GB2004/004839

(22) International Filing Date:

17 November 2004 (17.11.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 0326798.6

17 November 2003 (17.11.2003)

(71) Applicant (for all designated States except US): CRU-SADE LABORATORIES LIMITED [GB/GB]; PO Box 1716, Glasgow Strathclyde G51 4WF (GB).

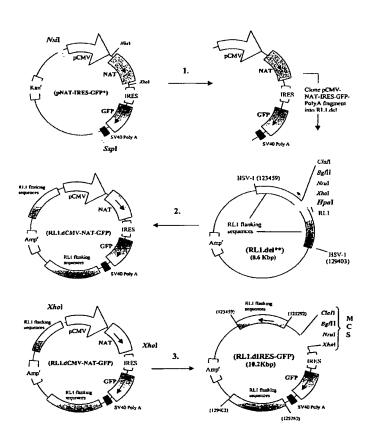
(72) Inventors; and

(75) Inventors/Applicants (for US only): BROWN, Susanne Moira [GB/GB]; c/o Crusade Laboratories Limited, PO Box 1716, Glasgow Strathclyde G51 4WF (GB). DUNN, Paul [GB/GB]; c/o Crusade Laboratories Limited, PO Box 1716, Glasgow Strathclyde G51 4WF (GB). CONNER, Joe [GB/GB]; c/o Crusade Laboratories Limited, PO Box 1716, Glasgow Strathclyde G51 4WF (GB).

- (74) Agents: CLEGG, Richard et al.; Mewburn Ellis LLP, York House, '23 Kingsway, London Greater London WC2B 6HP (GB).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: VECTORS, MUTANT VIRUSES AND METHODS FOR GENERATING MUTANT VIRUSES



(57) Abstract: A nucleic acid vector comprising first and second nucleotide sequences corresponding to nucleotide sequences flanking an insertion site in the genome of a selected herpes simplex virus strain; and a cassette located between said first and second nucleotide sequences comprising nucleic acid encoding: (a) one or a plurality of insertion sites and/or a nucleotide sequence of interest; and (b) a ribosome binding site or a regulatory nucleotide sequence; and (c) a marker is disclosed. Herpes simplex viruses generated using said vector, methods for their generation and herpes simplex viruses having a genome comprising heterologous nucleic acid are also disclosed.

WO 2005/049844 A3



GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

- with (an) indication(s) in relation to deposited biological material furnished under Rule 13bis separately from the description
- (88) Date of publication of the international search report: 20 October 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.